

GENERAL NOTES

- THE PROJECT IS IN CONFORMANCE WITH THE LATEST HOWARD COUNTY STANDARDS UNLESS WAIVERS HAVE BEEN APPROVED.
- THE EXISTING TOPOGRAPHY SHOWN HEREON IS BASED ON HOWARD COUNTY GIS.
- THE PROJECT BOUNDARY IS BASED ON PRECISION INPUT FROM DEEDS, BY OTHERS, FROM LIBER 12845 FOLIO 431, DATED 09 NOV. 2010, LIBER 3582 FOLIO 569 DATED 10 OCT. 1995, AND LIBER 7200 FOLIO 336 DATED 08 APR. 2003 AND RECENT SURVEYS BY PHILIP AND PHOENIX ENGINEERING.
- THE COORDINATES AND ELEVATIONS SHOWN HEREON ARE BASED UPON THE HOWARD COUNTY GEODETIC CONTROL WHICH IS BASED UPON THE MARYLAND STATE PLANE COORDINATE SYSTEM, HOWARD COUNTY CONTROL STATION 0024 AND BENCHMARKS WERE USED FOR THIS PROJECT.
- THE SUBJECT PROPERTY IS ZONED CAC-CL INDUSTRIAL IN ACCORDANCE WITH THE ZONING REGULATIONS EFFECTIVE ON OCT. 06, 2013, AND IS SUBJECT TO SUBDIVISION AND LAND DEVELOPMENT REGULATIONS EFFECTIVE OCT. 07, 2007 PER COUNCIL BILL 47-2007 & 48-2007. DEVELOPMENT OR CONSTRUCTION ON THIS PROPERTY MUST COMPLY WITH SETBACK AND BUFFER REGULATIONS IN EFFECT AT THE TIME OF SUBMISSION OF THE SITE DEVELOPMENT PLAN, WAIVER PETITION APPLICATION OR BUILDING/GRADING PERMIT APPLICATIONS.
- NO GRADING, REMOVAL OF VEGETATIVE COVER OR TREES, PAVING AND NEW STRUCTURES SHALL BE PERMITTED WITHIN THE LIMITS OF WETLANDS, STREAM(S) OR THEIR REQUIRED BUFFERS, FLOODPLAIN AND FOREST CONSERVATION EASEMENT AREAS, EXCEPT AS REQUIRED FOR NECESSARY DRAINAGE OUTFALLS.
- THIS PROPERTY IS LOCATED WITHIN THE METROPOLITAN DISTRICT.
- WATER FOR THIS PROJECT IS PUBLIC, CONTRACT #W108B-30335.
- SEWER FOR THIS PROJECT IS TO BE PUBLIC, CONTRACT #22-S.
- EXISTING UTILITIES LOCATED FROM AS-BUILT DRAWINGS AND COUNTY GIS. CONTRACTOR SHALL LOCATE EXISTING UTILITIES WELL IN ADVANCE OF CONSTRUCTION ACTIVITIES AND TAKE ALL NECESSARY PRECAUTIONS TO PROTECT THE EXISTING UTILITIES AND TO MAINTAIN UNINTERRUPTED SERVICE.
- THERE IS AN AREA OF "100 YEAR FLOODPLAIN" LOCATED WITHIN THE DEVELOPMENT AREA AS PER FEMA DFRM MAPS AND ELEVATIONS APPROVED BY FEMA AND EFFECTIVE FOR COUNTY DEVELOPMENT RESTRICTIONS AS OF MAY 6, 2013. THE FLOODPLAIN WILL REMAIN UNDISTURBED WITH THE EXCEPTION OF A NECESSARY OUTFALL FOR STORMWATER MANAGEMENT.
- THERE ARE MDE STEEP SLOPES $\geq 20\%$ OVER 20,000 S.F. CONTIGUOUS WHICH LAY PARTIALLY WITHIN THE SITE BOUNDARY, 13,865 S.F. (0.32 AC.) OF WHICH IS ON SITE. THERE ARE 29,804 S.F. (0.68 AC.) OF HIGHLY ERODIBLE SOILS ON SITE.
- THE PROJECT SITE WAS EVALUATED FOR THE PRESENCE OF ENVIRONMENTAL FEATURES AND A LETTER HAS BEEN PREPARED BY ECO-SCIENCE PROFESSIONALS, INC. C/O MR. JOHN CANOLES, DATED AUGUST 19, 2017. MR. CANOLES NOTED AREAS OF FOREST, FLOODPLAIN AND STREAM BUFFER BUT NO SPECIMEN TREES OR ANY OTHER REGULATED ENVIRONMENTAL FEATURES WERE FOUND WITHIN THE LIMITS OF THE DEVELOPMENT AREA FOR THIS PROJECT.
- IN ACCORDANCE WITH SECTION 16.1202(b)(2)(i) OF THE HOWARD COUNTY CODE, THIS PROJECT IS EXEMPT FROM FOREST CONSERVATION WITH A DOI AS THE TOTAL CUTTING, CLEARING OR GRADING OF FOREST RESOURCES IS LESS THAN 40,000 SQUARE FEET, AND THE FOREST RESOURCES AFFECTED BY DEVELOPMENT ARE NOT SUBJECT TO A PREVIOUSLY APPROVED FOREST CONSERVATION PLAN.
- THERE ARE 0 S.F. (0.00 AC.) AREA OF WETLANDS PRESENT WITHIN THE DEVELOPMENT AREA PER FIELD STUDY BY ECO-SCIENCE PROFESSIONALS, INC. C/O MR. JOHN CANOLES, DATED AUGUST 4, 2017.
- OPEN SPACE REQUIRED FOR CAC-CL ZONING IS THE GREATER OF 10% OF TOTAL AREA OR 0.25 AC. 3.07 AC. \times 10% = 0.31 AC. REQUIRED. 24,188 SF OR 0.55 AC. PROVIDED.
- GEOTECHNICAL INVESTIGATIONS SHALL COMPLETED AS PART OF THE SITE DEVELOPMENT PLAN SUBMISSION.
- A NOISE STUDY WILL BE COMPLETED AT PART OF THE SITE DEVELOPMENT PLAN SUBMISSION.
- FURNACE AVENUE IS CLASSIFIED AS A MINOR COLLECTOR. SITE ACCESS SHALL BE VIA A PRIVATE ROADS. TO THE BEST OF THE OWNERS KNOWLEDGE, THERE ARE NO BURIAL GROUNDS, CEMETERIES, OR HISTORIC STRUCTURES LOCATED WITHIN THE DEVELOPMENT AREA.
- ALL EXISTING STRUCTURES WITHIN THE DEVELOPMENT AREA SHALL BE DEMOLISHED AND REMOVED.
- THE PROPOSED BUILDINGS SHALL HAVE AN AUTOMATIC FIRE PROTECTION SPRINKLER SYSTEM.
- THIS SITE QUALIFIES AS REDEVELOPMENT. STORMWATER MANAGEMENT FOR THE PROJECT IS PROVIDED BY THE USE OF NON-STRUCTURAL AND MICRO-SCALE PRACTICES IN ACCORDANCE WITH ENVIRONMENTAL SITE DESIGN CRITERIA. MICRO-SCALE PRACTICES INCLUDE TWO (2) MICROBIORETENTION FACILITIES (M-6). THESE FACILITIES WILL BE PRIVATELY OWNED AND MAINTAINED.
- APPROVAL OF THIS ENVIRONMENTAL CONCEPT PLAN (ECP) DOES NOT CONSTITUTE AN APPROVAL OF ANY SUBSEQUENT AND ASSOCIATED SITE DEVELOPMENT PLAN. REVIEW OF THIS PROJECT FOR COMPLIANCE WITH THE HOWARD COUNTY ZONING REGULATIONS SHALL OCCUR AT THE SITE DEVELOPMENT PLAN STAGE. THE APPLICANT AND CONSULTANT SHOULD EXPECT ADDITIONAL AND MORE DETAILED REVIEW COMMENTS (INCLUDING COMMENTS THAT MAY ALTER THE OVERALL SITE DESIGN) AS THIS PROJECT PROGRESSES THROUGH THE PLAN REVIEW PROCESS.
- APPROVAL OF THIS ENVIRONMENTAL CONCEPT PLAN (ECP) BY THE HOWARD COUNTY CONSERVATION DISTRICT DOES NOT GUARANTEE APPROVAL OF THE PROPOSED SEDIMENT CONTROL SCHEME.
- HYDROIC SOILS ARE PRESENT ONSITE.

SITE DATA

TAX MAP 38, BLOCK 4, PARCEL 782
 1ST ELECTION DISTRICT
 PRESENT ZONING: CAC-CL
 TOTAL AREA OF PROPERTY: 3.07 AC.
 D/PZ REFERENCE: L.07200/F.00336, L.07200/F.00375, L.06662/F.00378
 AREA MANAGED BY ESDV (*THIS PLAN-"DEVELOPMENT AREA"): 116,971 S.F./2.69 AC.
 USE OF PROPOSED STRUCTURES (THIS PLAN): APARTMENT RESIDENTIAL
 *TOTAL BUILDING COVERAGE WITHIN THE DEVELOPMENT AREA: 35,944 SF (0.83 AC. OR 30.73%)
 *PAVED AREA WITHIN THE DEVELOPMENT AREA: 46,813 SF (1.06 AC. OR 40.16%)
 *LIMIT OF DISTURBED AREA (THIS PLAN): 116,971 SF / 2.69 AC
 WETLANDS ON SITE: 0.00 AC.
 WETLAND BUFFERS ON SITE: 0.00 AC.
 STREAMS AND THEIR BUFFERS ON SITE: 0.305 AC.
 AREA OF 100 YEAR FLOODPLAIN: 0.37 AC.
 *AREA OF EXISTING FOREST ON SITE: 0.03 AC.
 AREA OF MDE STEEP SLOPES (20% OR GREATER): 13,865 S.F. (0.32 AC.)
 *AREA OF ERODIBLE SOILS: 29,804 S.F. (0.68 AC.)
 *IMPERVIOUS AREA: 82,917 S.F. (1.90 AC. OR 70.89%)
 *GREEN/OPEN AREA: 34,054 S.F. (0.78 AC. OR 29.11%)
 NOTE *WITHIN LIMITS OF DEVELOPMENT AREA ONLY

ENVIRONMENTAL SITE DESIGN NARRATIVE

- IN ACCORDANCE WITH CHECKLIST ITEM 11.K.
- THE PROJECT SITE IS LOCATED IN THE CAC-CL ZONING DISTRICT, ON THE NORTHEAST SIDE OF FURNACE AVENUE, JUST SOUTHWEST OF MIAMI COURT AND NORTHWEST OF PARADISE AVENUE AND ADJACENT TO THE PATAPSCO RIVER TO THE NORTHEAST. THE CONTIGUOUS PARCEL AREA IS 3.07 AC. AND THE ACCESS WILL BE PROVIDED THROUGH PRIVATE ROADWAYS AND ALLEYS. AN ENVIRONMENTAL STUDY BY ECO-SCIENCE PROFESSIONALS, INC. DETERMINED THAT THERE ARE NO WETLANDS OR THEIR BUFFERS WITHIN THIS DEVELOPMENT AREA. THE LIMITS OF STREAMS AND THEIR BUFFERS HAVE BEEN IDENTIFIED ON THE PROPERTY. THESE AREAS WILL REMAIN UNDISTURBED WITH THE EXCEPTION OF A NECESSARY STORM WATER OUTFALL. THERE ARE SEVERAL AREAS OF EXISTING TOPOGRAPHY THAT INCLUDE STEEP SLOPES OVER 15% WITHIN THIS DEVELOPMENT AREA. MOST ARE SMALL AND DISCONNECTED, HOWEVER THERE IS ONE CONTIGUOUS AREA OF STEEP SLOPES $\geq 25\%$ AT THE NORTHEAST PROPERTY LINE. ONLY 12,033 S.F. OF THIS CONTIGUOUS AREA OF STEEP SLOPES IS LOCATED WITHIN THE PROPERTY BOUNDARY. ACCORDING TO CURRENT DFRM APPROVED BY FEMA AND HOWARD COUNTY, THERE IS AN AREA OF 100YR FLOODPLAIN LOCATED WITHIN THE PROPERTY BOUNDARY. THE NATURAL RESOURCES WILL REMAIN UNDISTURBED, PROTECTED AND ENHANCED WITH THE EXCEPTION OF A NECESSARY STORM DRAIN OUTFALL.
 - THE SITE'S TOPOGRAPHY NATURALLY SLOPES FROM THE SOUTHWEST TO THE NORTHEAST AND DIRECTLY INTO THE PATAPSCO RIVER. THE SITE HAS BEEN DESIGNED TO MAINTAIN THESE NATURAL FLOW PATTERNS.
 - THE CONCEPTUAL REDUCTION IN IMPERVIOUS AREA THROUGH BETTER SITE DESIGN IS ACHIEVED THROUGH THE ENVIRONMENTAL SITE DESIGN (ESD) FOR THE PROJECT TO THE MAXIMUM EXTENT PRACTICABLE (MEP). THE ESD CONCEPT PROPOSES THE USE OF TWO (2) MICRO-BIORETENTION FACILITIES (M-6). THE OVERFLOW FOR THE PROPOSED MICRO-BIORETENTION (M-6) WILL DISCHARGE TO THE PATAPSCO RIVER. THE SITE HAS BEEN GRADED TO MAINTAIN EXISTING DRAINAGE FLOW PATTERNS.
 - SEDIMENT CONTROL FOR THIS SPECIFIC SITE PLAN WILL BE PROVIDED THROUGH THE USE OF PERIMETER CONTROLS (PRIMARY SILT FENCE AND/OR SUPER SILT FENCE). SEDIMENT CONTROL SHALL BE IN ACCORDANCE WITH THE CURRENT REQUIREMENTS AND SHALL BE APPROVED BY THE HOWARD COUNTY CONSERVATION DISTRICT.
 - AS STATED IN #3 ABOVE, STORMWATER MANAGEMENT FOR THE PROJECT SHALL BE MET THROUGH THE USE OF TWO (2) MICRO-BIORETENTION FACILITIES (M-6). THESE FACILITIES WILL BE PRIVATELY OWNED AND MAINTAINED. THE PROPOSED SITE DESIGN QUALIFIES AS RE-DEVELOPMENT AND WILL INCORPORATE MICRO-SCALE PRACTICES. TO INCLUDE MICRO-BIORETENTION (M-6) FACILITIES IN ORDER TO TREAT THE REQUIRED 1" OF RUNOFF FOR 50% OF THE EXISTING IMPERVIOUS AREA PLUS FULL TREATMENT FOR 100% OF ANY NEW IMPERVIOUS AREA. THIS SITE HAS A NET REDUCTION IN IMPERVIOUS AREA FOR THE PROPOSED CONDITION, SO THE REQUIREMENT FOR TREATMENT IS 1" OVER 50% OF THE EXISTING IMPERVIOUS, LESS THE NET REDUCTION IN IMPERVIOUS. PRE-DEVELOPMENT IMPERVIOUS = 2.38 AC.
 POST-DEVELOPMENT IMPERVIOUS = 1.90 AC.
 POST-DEVELOPMENT IMPERVIOUS TO BE TREATED = 1.90 - 2.38 = (-0.48 AC) IMPERVIOUS REDUCTION
 50% PRE-DEVELOPMENT IMPERVIOUS = 1.19 AC.
 TOTAL IMPERVIOUS TO MANAGE = 1.19 - 0.48 = 0.71 ACRES.
- TARGET PE = 1.00" PROVIDED PE = 1.00"
 TARGET ESDV = 2448 CUFT PROVIDED = 2991 CUFT

NOTES:

- APPROVAL OF THIS ECP DOES NOT CONSTITUTE AN APPROVAL OF ANY SUBSEQUENT AND ASSOCIATED BUILDING AND/OR GRADING PERMIT
- REVIEW OF THIS PLAN FOR COMPLIANCE WITH ZONING AND SUBDIVISION AND LAND DEVELOPMENT REGULATIONS SHALL OCCUR AT THE PERMIT STAGES; AND THEREFORE, THIS PLAN IS SUBJECT TO ADDITIONAL AND MORE DETAILED COMMENTS AS THE PLAN PROGRESSES THROUGH THE PERMIT PROCESS.
- ENVIRONMENTAL FEATURES: THERE ARE NO WETLANDS, STREAMS OR STEEP SLOPES WITHIN THE DEVELOPED AREA. THE SITE IS PARTIALLY FORESTED WITH A GARDEN SEATING AREA AND AN AREA MAINTAINED AS LAWN FOR THE BENEFIT OF THE ADJACENT PROPERTY OWNER.
- NO DISTURBANCE TO ANY STREAMS, FLOODPLAIN, WETLANDS OR THEIR BUFFERS ARE PROPOSED.

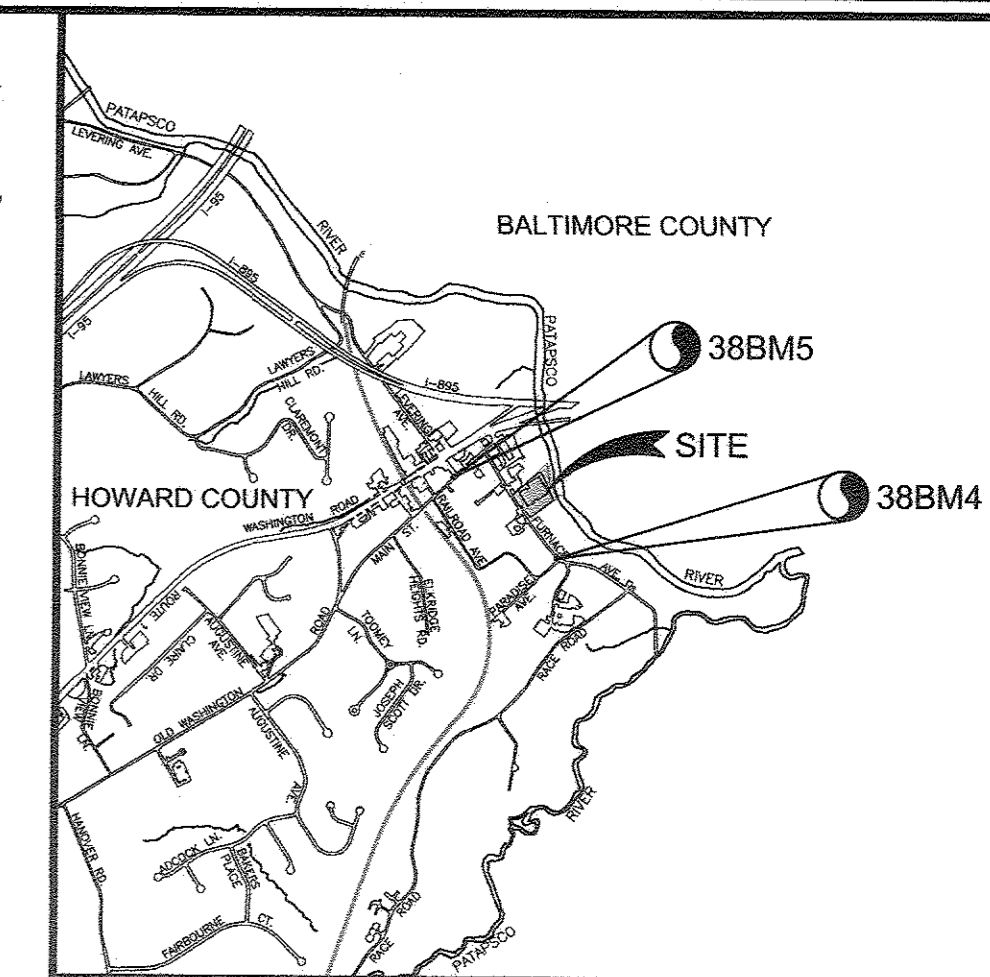
ENVIRONMENTAL CONCEPT PLAN

RIVER WATCH II

5635-5659 FURNACE AVENUE
 PARCEL 782

BENCHMARKS

HOWARD COUNTY BENCHMARK 38BM4
 N 563,602.10 E 1,395,768.99 ELEV.: 30.82'
 HOWARD COUNTY BENCHMARK 38BM5
 N 564,441.00 E 1,394,694.00 ELEV.: 42.368'



VICINITY MAP

SCALE: 1"=2000'
 ADC MAP COORDINATES: 4937-06

SHEET INDEX

COVER SHEET	DESCRIPTION	SHEET NO.
	GRADING EROSION AND SEDIMENT CONTROL PLAN, ESDV DRAINAGE AREA MAP AND DETAILS	1 OF 2
		2 OF 2

LEGEND

- EXISTING CONTOUR
- PROPOSED CONTOUR
- EXISTING CURB AND GUTTER
- PROPOSED CURB AND GUTTER
- EXISTING UTILITY POLE
- EXISTING LIGHT POLE
- EXISTING MAILBOX
- EXISTING SIGN
- EXISTING SANITARY MANHOLE
- EXISTING SANITARY LINE
- EXISTING CLEANOUT
- EXISTING FIRE HYDRANT
- EXISTING WATER LINE
- EXISTING GAS LINE
- EXISTING FENCE
- PROPERTY LINE
- RIGHT-OF-WAY LINE
- EXISTING TREE LINE
- PROPOSED TREE LINE
- PROPOSED STORM DRAIN
- PROPOSED MANHOLE
- PROPOSED DIVERSION MANHOLE
- PROPOSED CLEANOUT
- PROPOSED WATER VALVE
- PROPOSED FIRE HYDRANT
- PROPOSED SIDEWALK
- HIGHLY ERODIBLE SOILS
- MDE STEEP SLOPE ($\geq 20\%$)

OWNER

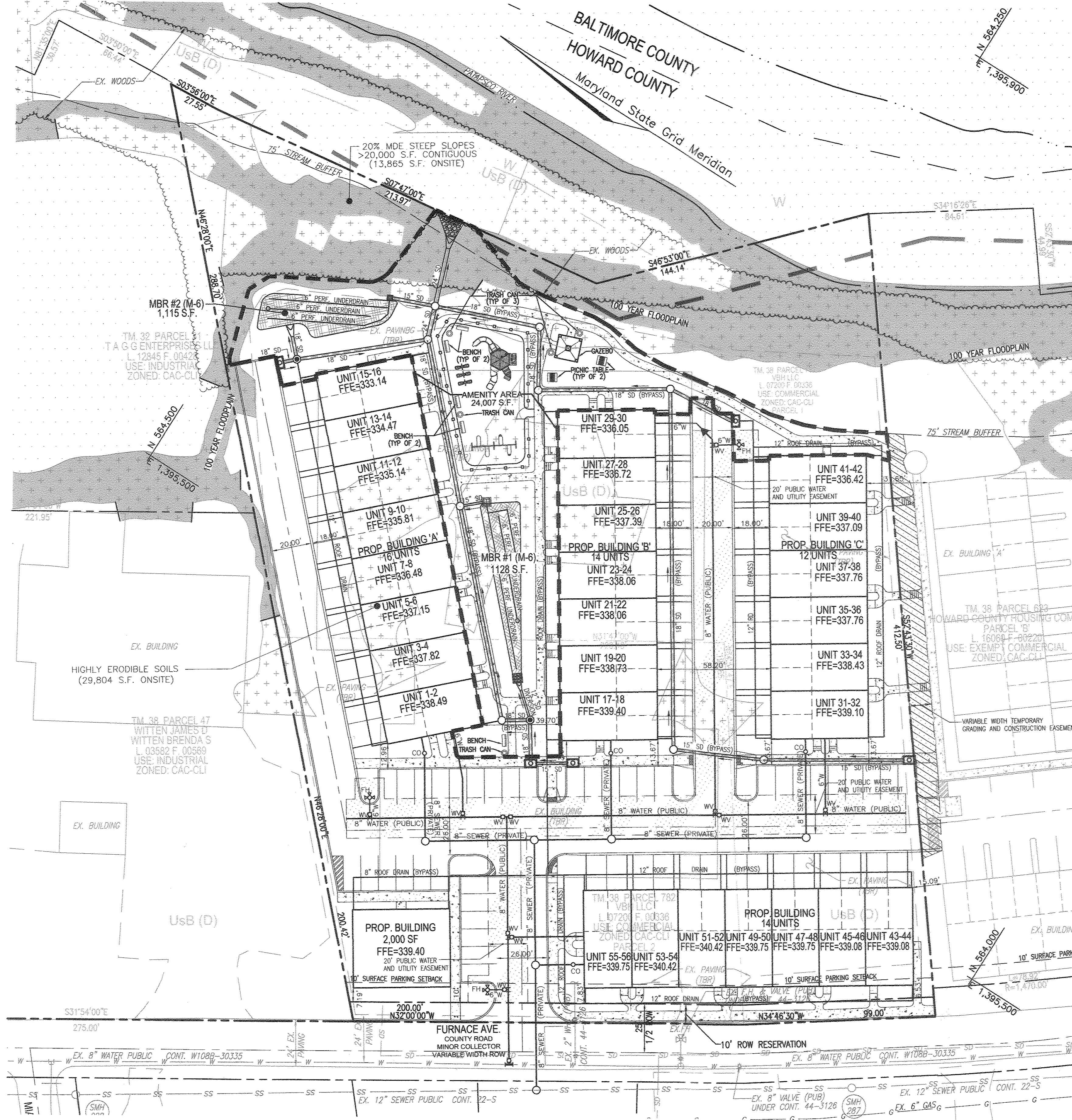
VHIL LLC
 9113 BRAE BROOKE DRIVE
 LANHAM, MD 20706

DEVELOPER

J. KIRBY DEVELOPMENT, LLC
 C/O JEFF KIRBY, PRESIDENT
 5760 B FURNACE AVENUE
 ELK RIDGE, MD 21075
 PHONE: (410) 788-0027

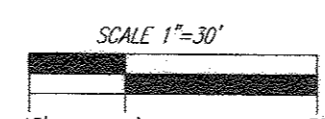
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

[Signature] 3/2/18
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE
[Signature] 3/2/18
 CHIEF, DIVISION OF LAND DEVELOPMENT JS for NH DATE



PLAN VIEW

SCALE: 1"=30'



ENVIRONMENTAL CONCEPT PLAN

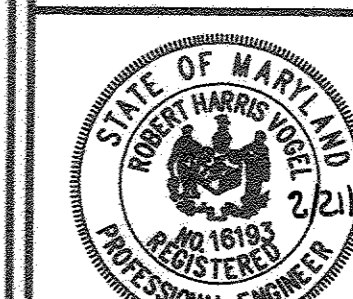
COVER SHEET

RIVER WATCH II

5635-5659 FURNACE AVENUE

TAX MAP 38 GRID 04 PARCEL 782
 1ST ELECTION DISTRICT ZONED: CAC-CL HOWARD COUNTY, MARYLAND

ROBERT H. VOGEL ENGINEERING, INC.
 ENGINEERS • SURVEYORS • PLANNERS
 8407 MAIN STREET TEL: 410.461.7666
 ELLICOTT CITY, MD 21043 FAX: 410.461.8961



DESIGN BY: GAH
 DRAWN BY: GAH
 CHECKED BY: RLV
 DATE: FEBRUARY 2018
 SCALE: 1" = 30'
 W.D. NO.: 17-00

PROFESSIONAL CERTIFICATE
 I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND LICENSE NO. 16183 EXPIRATION DATE 07-28-2018

